

Appl. No. : 10/720,824
Filed : November 24, 2003

AMENDMENTS TO THE CLAIMS

Please replace all prior listings and versions of claims with the following listing of claims.

Claims 1-27 have been cancelled

28. (New) An exercise apparatus comprising:
 - a support frame and a ring gear supported by said support frame;
 - a crank supported for rotation about a crank axis relative to said support frame;
 - a planetary gear positioned within and engaged with said ring gear, said planetary gear being rotationally connected to said crank about a planetary gear axis; and
 - a foot-pedal rotationally connected to said planetary gear, whereby said foot-pedal follows a substantially elliptical foot-path as pedal circulates about said planetary gear axis and said crank rotates about said crank axis.
29. (New) The exercise apparatus of Claim 28 wherein said effective working diameter of said planetary gear is equal to one-half said effective working diameter of said ring gear.
30. (New) The exercise apparatus of Claim 28 wherein said number of teeth formed on said planetary gear is equal to one-half said number of teeth formed on said ring gear.
31. (New) The exercise apparatus of Claim 28 wherein said effective working diameter of said planetary gear is equal to about twice said effective crank-arm length of said crank.
32. (New) The exercise apparatus of Claim 28 wherein said crank has an effective crank-arm length and wherein a major axis of said elliptical foot-path is greater than twice said effective crank-arm length.
33. (New) The exercise apparatus of Claim 32 wherein said major axis of said elliptical foot-path is about quadruple said effective crank-arm length.
34. (New) The exercise apparatus of Claim 28 further comprising a resistance device and/or motor coupled to said crank.
35. (New) An elliptical foot-path exercise apparatus comprising:
 - a support frame;
 - a crank rotatable relative to said support frame about a crank axis, said crank having an effective crank-arm length;
 - a foot pedal in mechanical communication with said crank, said foot pedal being sized and arranged relative to said crank so as to follow a substantially elliptical foot-path

Appl. No. : 10/720,824
Filed : November 24, 2003

relative to said support frame and a major axis of said substantially elliptical foot-path being greater than twice said effective crank-arm length.

36. (New) The exercise apparatus of Claim 35, wherein said major axis of said substantially elliptical foot-path is about quadruple said effective crank-arm length.

37. (New) The exercise apparatus of Claim 35 comprising a planetary gear mechanically coupling said crank to said foot pedal and being sized and arranged to engage a sun/ring gear so as to form an epicyclic gear train.

38. (New) The exercise apparatus of Claim 37 wherein said effective working diameter of said planetary gear is equal to one-half said effective working diameter of said sun/ring gear.

39. (New) The exercise apparatus of Claim 35 further comprising a resistance device and/or motor coupled to said crank.

40. (New) An exercise apparatus for providing simulated walking or running motion, said apparatus comprising two planetary gears, two sun/ring gears and at least one crank supported and arranged so as to be rotatable about a crank axis, each said planetary gear being pivotably secured to said at least one crank about a pivot point and being sized and arranged such that as said at least one crank is rotated said planetary gears engage and rotate relative to said sun/ring gears while simultaneously revolving about said crank axis so as to form an epicyclic gear train, and two foot pedals each pivotably secured to a corresponding one of said planetary gears, said foot pedals being sized and arranged to support said feet of a user and whereby each said foot-pedal follows a substantially elliptical foot-path as said at least one crank is rotated.

41. (New) The exercise apparatus of Claim 40 wherein said effective working diameter of each said planetary gears is equal to one-half said effective working diameter of each said sun/ring gear.

42. (New) The exercise apparatus of Claim 40 wherein said effective working diameter of each said planetary gears is equal to about twice said effective crank-arm length of said at least one crank.

43. (New) The exercise apparatus of Claim 40 wherein said major axis of said substantially elliptical foot-path is greater than twice said effective crank-arm length of said at least one crank.

44. (New) The exercise apparatus of Claim 40 further comprising a resistance device and/or motor coupled to said at least one crank.

Appl. No. : 10/720,824
Filed : November 24, 2003

45. (New) An exercise apparatus comprising a support frame having a right side and a left side, at least one crank supported relative to said support frame so as to be rotatable about a crank axis, at least one sun/ring gear supported on said support frame, at least one planetary gear pivotally supported relative to a said at least one crank, rotatable therewith and sized and positioned to engage said at least one sun/ring gear so as to form an epicyclic gear train, and at least one foot pedal pivotally supported relative to said at least one planetary gear, said at least one foot pedal being disposed between said right side and said left side of said support frame.

46. (New) The exercise apparatus of Claim 45 comprising a right crank and a left crank, each said crank being supported relative to said support frame so as to be rotatable about a common crank axis, a right sun/ring gear and a left sun/ring gear, each of said sun/ring gears being supported on a corresponding side of said support frame such that a space is provided therebetween, and a right planetary gear and a left planetary gear, each planetary gear being pivotally supported relative to a corresponding one of said cranks, rotatable therewith and sized and positioned to engage a corresponding one of said sun/ring gears so as to form an epicyclic gear train.

47. (New) The exercise apparatus of Claim 45 further comprising a right foot-pedal and a left foot-pedal, each foot pedal being pivotally supported relative to a corresponding one of said planetary gears, said right and left foot pedals being disposed between said right and left sides of said support frame.